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48150 7590 08/06/2007 MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			EXAMINER KIM, PAUL	
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

**AUG 06 2007**

**Technology Center 2100**

Application Number: 10/671,938  
Filing Date: September 29, 2003  
Appellant(s): CHEN ET AL.

\_\_\_\_\_  
Frederick E. Cooperrider  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 27 April 2007 appealing from the Office action mailed 27 November 2006.

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters. The brief is deficient because Appellant fails to describe, as recited in claim 9, the method steps of "maintaining one or more customer interests" and "notifying a subset of said customers" by setting forth with reference to the specification by page and line number.

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**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,915,251

Burrows et al.

06-1999

Liu et al. "Continual Queries for Internet Scale Event-Driven Information Delivery," published by Oregon Graduate Institute of Science and Technology, 1999.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the Appellant regards as his invention.

2. **Claim 20** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellant regards as the invention. The claim recites "a set of working rectangles in an event space that become progressively smaller in size." It is unclear whether the set of working rectangles or the event space become progressively smaller in size. Additionally, it is unclear as to what is meant by the phrase "progressively smaller."

***Claim Rejections - 35 USC § 101***

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3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The rejections of claims 1-20 under 35 U.S.C. 101 for failing to provide a tangible result are withdrawn.

4. **Claims 16-19** are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The limitations of the claim recite having virtual constructs comprise rectangular object in an event space having at least one dimension. In the case where the event space would be one-dimensional, a rectangular object could not exist in the event space. Therefore, the disclosed invention as recited would be inoperable.

5. While claim 5 is not rejected on prior art, it is also not indicated as containing allowable subject matter until such time as the rejections under 35 U.S.C. 101 are overcome.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claim 9** is rejected under 35 U.S.C. 102(b) as being anticipated by Liu et al (NPL Document, "Continual Queries for Internet Scale Event-Driven Information Delivery, hereinafter referred to as LIU), published in 1999.

8. **As per independent claim 9**, LIU teaches:

A method of providing a service of monitoring events or conditions, said method comprising at least one of the following:

providing a service that monitors events against interests of a customer, said service monitoring said events by decomposing continual range queries related to said customer interests with one or predefined virtual constructs, building a query index, and using said query index to match an event with said range queries;

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maintaining one or more customer interests expressed as continual range queries for the service that monitors events {See LIU, Section 4.4.2, wherein this reads over "the trigger condition is 'Stock.price(IBM) IncreaseBy% OR Stock.price(Intel) DecreaseBy% 5'"; and "the OpenCQ system may install the database triggers on the data columns or objects of interest"}; and

notifying a subset of said customers whose interests match an event.

Because "providing a service that monitors events against interests of a customer" and "notifying a subset of customers whose interests match an event were optionally recited within the claim, they do not carry any patentable weight.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1-4, 6-7, and 10-15** are rejected under 35 U.S.C. 103(a) as being unpatentable over LIU, in view of Burrows et al (U.S. Patent No. 5,915,251, hereinafter referred to as BURROWS), filed on 3 April 1998, and issued on 22 June 1999.

LIU teaches the limitations of claims 2, 4, 6, 7, and 11-13 for the reasons stated herein.

LIU differs from the claimed invention in that LIU fails to disclose a method comprising building a query index.

11. **As per independent claims 1, 10, and 15**, BURROWS, in combination with LIU, discloses:

A method for monitoring continual range queries against events, said method comprising:

decomposing {See BURROWS, Figure 12; and col. 16, lines 57-67, wherein this reads over "Parsing Queries" and "the query module can represent the query expression . . . as a query tree"; and col. 26, lines 12-19, wherein this reads over "[t]he range '57-70' can be converted to a Boolean search for the range-based metawords in the desired range"} each range query into one or more predefined virtual constructs {See BURROWS, col. 25, lines 34-35, wherein this reads over "[t]he predetermined interval can be used to generate a plurality of sets of subintervals"; and See LIU, Section 4.1, page 11, wherein this reads over "decomposing the trigger condition Tcq into a list of Tcq triplets, each triple consists of a basic update event, an atomic conditional event, and a connector to the next triple in the list"};

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building a query index {See BURROWS, col. 2, lines 16-23, wherein this reads over "[t]he range-based values are indexed as follows. There is one word entry for each subinterval which includes the range-based values, and the locations associated with the word entries representing the subintervals are the locations of the range-based portions of information"}; and

using said query index to match an event {See LIU, Section 4.4.2, wherein this reads over "the trigger condition is 'Stock.price(IBM) IncreaseBy% OR Stock.price(Intel) DecreaseBy% 5'"; and "the OpenCQ system may install the database triggers on the data columns or objects of interest"} with said range queries {See BURROWS, col. 8, lines 53-55, wherein this reads over "[t]he SIZE and DATE attributes can be searched using range-based values"; and col. 25, lines 20-21, wherein this reads over "the metawords which are to be used for scanning the index are selected from the 'bottom' level up"}.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention suggested by LIU by combining it with the invention disclosed by BURROWS. The results of this combination would lead to a method for monitoring continual queries against events wherein range queries (or trigger conditions) are decomposed into virtual constructs (e.g. a list of triplets) and a query index used to match an event with the aforementioned range queries.

One of ordinary skill in the art would have been motivated to do this modification so that a query index may be used to match an event with the continual range queries specified by a user.

12. **As per dependent claim 2, BURROWS, in combination with LIU, discloses:**

The method of claim 1, said building of a query index further comprising: storing an identification of said query {See LIU, Section 3.1, page 7, wherein this reads over "each continual query 'has a unique entity identifier'"} with identification lists associated with said virtual constructs.

13. **As per dependent claim 3, BURROWS, in combination with LIU, discloses:**

The method of claim 1, said building of a query index further comprising:

predefining a set of virtual constructs for each point being monitored {See BURROWS, col. 2, lines 16-23, wherein this reads over "[t]he range-based values are indexed as follows. There is one word entry for each subinterval which includes the range-based values, and the locations associated with the word entries representing the subintervals are the locations of the range-based portions of information"}.

14. **As per dependent claim 4, BURROWS, in combination with LIU, discloses:**

The method of claim 1, said matching of an event with said range queries further comprising: finding all the virtual constructs that cover said event {See LIU, Section 4.1, page 11, wherein this reads over "the condition evaluation manager . . . first select[s] a triplet from the list of Tcq . .

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[and] if the connector is WHERE, the next triplet in the list will be used as an add-on condition to the basic update event component”}.

15. **As per dependent claim 6**, BURROWS, in combination with LIU, discloses:

The method of claim 4, wherein the size of the set of covering virtual constructs of an event is constant for all the event points {See LIU, Section 2.1, wherein this reads over “temporal events are supported for time-based trigger condition . . . regular time interval (e.g., execute Q every Monday or every two weeks”}.

16. **As per dependent claim 7**, BURROWS, in combination with LIU, discloses, as best understood:

The method of claim 4, wherein gaps between corresponding different covering virtual constructs of all event points are identical {See LIU, Section 2.1, wherein this reads over “temporal events are supported for time-based trigger condition . . . regular time interval (e.g., execute Q every Monday or every two weeks”}.

17. **As per dependent claim 11**, BURROWS, in combination with LIU, discloses:

The system of claim 10, further comprising: at least one sensor to detect occurrence of events {See LIU, Section 4.4.1, wherein this reads over “a temporal event detector”}.

18. **As per dependent claim 12**, BURROWS, in combination with LIU, discloses:

The system of claim 10, further comprising: at least one client input station to permit a client to provide an input query {See LIU, Figure 1, page 20; and Chapter 5, page 19, wherein this reads over “[t]he client tier has four components: (1) The form manager that provides the CQ clients with fill-in forms to register and install their continual queries”}.

19. **As per dependent claim 13**, BURROWS, in combination with LIU, discloses:

The system of claim 10, further comprising: at least one client receiver to permit a client to be notified of occurrence of an event of interest {See LIU, Chapter 5, page 20, wherein this reads over “[t]he results can be returned to the user also by multiple modes, such as by email, fax, phone, bulletin posting, or displaying signals on users’ desktop screens”}.

20. **As per independent claim 14**, BURROWS, in combination with LIU discloses:

An apparatus for monitoring continual range queries against events, said apparatus comprising one of:

a query monitor that includes:

a decomposing module that decomposes each range query into one or more predefined virtual constructs {See BURROWS, Figure 12; and col. 16, lines 57-67, wherein this reads over “Parsing Queries” and “the query module can represent the query expression . . . as a query tree”; and col. 26, lines 12-19, wherein this reads over “[t]he range ‘57-70’ can be converted to a Boolean search for the range-based metawords in the desired range”; and See LIU, Section 4.1, page 11, wherein this reads over “decomposing the trigger condition Tcq into a list of Tcq triplets, each triple consists of a basic update event, an atomic conditional event, and a connector to the next triple in the list”}.



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a query index construction module {See BURROWS, col. 2, lines 16-23, wherein this reads over "[t]he range-based values are indexed as follows. There is one word entry for each subinterval which includes the range-based values, and the locations associated with the word entries representing the subintervals are the locations of the range-based portions of information"}; and

an event matching module that uses said query index to match an event {See LIU, Section 4.4.2, wherein this reads over "the trigger condition is 'Stock.price(IBM) IncreaseBy% OR Stock.price(Intel) DecreaseBy% 5'"; and "the OpenCQ system may install the database triggers on the data columns or objects of interest"} with said range queries {See BURROWS, col. 8, lines 53-55, wherein this reads over "[t]he SIZE and DATE attributes can be searched using range-based values"; and col. 25, lines 20-21, wherein this reads over "the metawords which are to be used for scanning the index are selected from the 'bottom' level up"};

a sensor to detect occurrence of events and provides said occurrence of events into said query monitor {See LIU, Section 4.4.1, wherein this reads over "a temporal event detector"};

a client receiver to permit a client to be notified of occurrence of an event of interest to said client {See LIU, Chapter 5, page 20, wherein this reads over "[t]he results can be returned to the user also by multiple modes, such as by email, fax, phone, bulletin posting, or displaying signals on users' desktop screens"}.

## **(10) Response to Argument**

### **a. Ground 1: Rejection of Claims 1-20 under 35 U.S.C. 101**

Appellant asserts the argument that "the invention is clearly described in the specification as being expected on a computer (e.g., a machine) and directed to the practical utility of activity/event monitoring." See Appeal Brief, page 10. The Examiner respectfully disagrees. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the execution of the methods on a computer) are not recited in the rejected claim(s) 1-14. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). That is, while claim 1 fails to mention the use of any computer hardware and claims 10 and 14 recite the use of a module, it is noted that said module reads upon a software application. Therefore, the claims as recited lack functional capability because, absent execution, it cannot cause any of the claimed operations to be performed such that the claims recite nothing more than non-functional descriptive material.

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Additionally, claims 1-8 and 10-20 are rejected since the claims as recited fail to produce a "useful, concrete and tangible result." See *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601-02. MPEP2106. That is while the claims may indicate method steps of using a query index to match an event with range queries, it is noted that the claims fail to recite a use of said match. That is, should a match be found, the claims fail to recite a method step wherein a result is outputted to a user or process for display or use. The mere step of determining a match and failing to output said determined match lacks any real world application since said determined match would not be realized by any application or user until it has been outputted.

b. Ground 2: Rejection of Claims 16-19 under 35 U.S.C. 101

Appellant asserts the argument that "the word 'rectangle' is intended to mean a geometrical construct in dimensions other than merely two dimensional event spaces." The Examiner respectfully disagrees. The Examiner notes that line 2 of claim 16 recites the limitation of "an event space having at least one dimension." Therefore, wherein the event space were to only have one dimension, the points of said dimension may only form a line since the points may be described only around one axis. Accordingly, since a line is the only shape available in a one-dimensional even space, claim 16 would be inoperable since it recites the limitation that "said predefined virtual constructs comprise rectangular objects in said event space." That is, wherein a rectangle is commonly known to one of ordinary skill as having two pairs of parallel sides, it would be impossible to have a two-dimensional object within an event space having one dimension.

Additionally, Appellant asserts the argument that Appellant's proposed amendments "were clearly not raising any new issues, since it was the Examiner who raised the issue being addressed without taking into account the description in the specification." See Appeal Brief, page 12. The Examiner notes that it would have been clearly erroneous and careless on the part of the Examiner to disregard a recited limitation which proves to be inoperable due to the use of

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inconsistent language (i.e. a rectangular object in a one-dimensional space) on the part of the Appellant. As Appellant notes, "a 'rectangle' of a one-dimensional event space would be line segments." See Appeal Brief, page 12. While the Examiner agrees with Appellant's aforementioned assertion, it is noted that wherein the only shape available in a one-dimensional event space is a line, a rectangular object within said event space is not possible. Therefore, wherein Appellant proposed a claim amendment that required the event space to be of two-dimensions, excluding lines and points one a one-dimensional event space, Appellant effectively raised new issues.

c. Ground 3: Rejection of Claim 20 under 35 U.S.C. 112

Appellant asserts the argument that there would be "no confusion to one having ordinary skill in the art, as to the meaning of "progressively smaller in size." See Appeal Brief, page 13. The Examiner respectfully disagrees. It is noted that a rectangle may "become progressively smaller in size," either in its overall perimeter or area. Hence, the phrase "progressively smaller" is unclear because the reducing of a rectangle's perimeter does not necessitate a reduction in the rectangle's area. For example, a rectangle with the dimensions of 8 x 2 has a perimeter of 20 and an area of 16. Thereafter, should the method change the dimensions of the rectangle to the dimensions of 4 x 4, the resulting perimeter would be 18 while the area would remain at 16. Therefore, while Appellant claims that the use of the phrase "progressively smaller in size" would present no confusion to one having ordinary skill in the art, the Examiner notes that it is imperative that Appellant further clarify how the rectangle is reduced in size since a reduction in the perimeter of a rectangle would not necessarily mean that the area of the rectangle would have been similarly reduced.

d. Ground 4: Rejection of Claim 9 under 35 U. 102(b), as based on Liu

Appellant asserts the argument that "the underlying flaw of the rejection currently of record is that the Examiner fails to recognize that the final two claim limitations actually rely upon the first claim limitation for their respective meaning so that the plain meaning of the first limitation must also be satisfied in the rejection." See Appeal Brief, page 14. The Examiner respectfully disagrees. It is noted that the claim, as recited, is directed towards a "method comprising at least one of the following." Hence, the Examiner notes that the method, as recited, only requires at least one of the method steps listed: (1) providing a service that monitors events; (2) maintaining one or more customer interests; and (3) notifying a subset of customers. Therefore, were the method step of "maintaining one or more customer interests" be selected, the remaining two method steps would be optional since the method, as recited, requires at minimum only one method step. Therefore, since the other two method steps are optionally recited, the Examiner accorded no patentable weight to such. While Appellant assert that the plurality of claim limitations are not "separable optional" and "that proper claim construction requires that the first claim limitation cannot be ignored," it is then unclear to the Examiner and to one of ordinary skill in the art as to why Appellant would only require one of the method steps to occur. While proper claim construction (i.e. the antecedent basis of "the service" and "said customers") may arguably point to the necessity of the other two claim limitations, the Examiner notes that Appellant's claim construction has erroneously and unclearly indicated that only one of the method steps is necessary.

Additionally, while Appellant claims that "the terminology 'the service' in the second limitation requires that this service must satisfy the plain meaning of the claim language of the first claim limitation," the Examiner notes that the first claim limitation refers to the service as either "a service" or "said service." Therefore, it is unclear to the Examiner why the Appellant would refer to the service of the first limitation as "the service" when the first limitation uses the terminology "said service" to refer to the service. By using the terminology "the service" and

differentiating the services of the two claim limitations, Appellant has seemingly furthered the notion that the method steps of claim 9 are indeed separably optional.

e. Ground 5: Rejection of Claims 1-4, 6, 7, and 10-15 under 35 U.S.C. 103(a) as based on Liu, in view of Burrows

i. *Liu Differs Fundamentally from the Present Invention in Principle of Operation*

(1) Appellant asserts the argument that "[t]here is no attempt in Liu to discover an event having occurred as defined by one continual query and then identify which additional queries might also define that event." See Appeal Brief, page 17. In response to Appellant's argument that the references fail to show certain features of Appellant's invention, it is noted that the features upon which Appellant relies (i.e., identifying which additional queries might also define an event) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). That is, it is noted that while claims 1, 10, and 15 recite the method of "using said query index to match an event with said range queries," the claims as recited fail to recite another method step that identifies additional queries defining an event which has already been discovered "as having occurred as defined by one continual query."

(2) Secondly, Appellant asserts the argument that "the present invention simultaneously monitors all range queries represented in this single monitored event space." See Appeal Brief, page 18. In response to Appellant's argument that the references fail to show certain features of Appellant's invention, it is noted that the feature upon which Appellant relies (i.e., simultaneously monitoring all range queries in a single monitored event space) is not recited in

the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). That is, it is noted that while claims 1, 10, and 15 recite the method of "using said query index to match an event with said range queries," the claims as recited fail to recite said method as being simultaneously conducted by a monitor.

(3) Thirdly, Appellant asserts the argument that "Liu has no need to correlate events with input queries." See Appeal Brief, page 19. Specifically, Appellant asserts the argument that "Liu has no mechanism that determines whether an event detected for one continuous query is also an event for another continuous query." See Appeal Brief, page 19. In response to Appellant's argument that the references fail to show certain features of Appellant's invention, it is noted that the feature upon which Appellant relies (i.e., using an index to correlate an event detected by one query with an event for another query) is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

(4) Lastly, Appellant asserts the argument that "Liu does not have a query decomposition and does not have the 'virtual constructs' of the present invention." See Appeal Brief, page 20. The Examiner respectfully disagrees. Appellant is directed to Section 3.2 of Liu which discloses that "[m]ediators and wrappers are used to decompose the query or trigger condition according to the number of data sources used to evaluate the query or the trigger condition" (Liu, page 8). One of ordinary skill in the art at the time the invention was made would be able to properly discern that the aforementioned disclosure would read

upon and satisfy the decomposition step of the present invention. Furthermore, Appellant is directed to Section 2.1 of Liu wherein the Continual Query Concept is further disclosed, specifically that the processing of a continual query on a sequence of database states results in a sequence of query answers  $\{Q(S_1), Q(S_2), \dots, Q(S_n)\}$ . Therefore, as disclosed within Section 2.1 of Liu, one of ordinary skill in the art would then be able to apply the continual queries to time-based trigger conditions and content-based trigger conditions. Accordingly, the continual query may then be decomposed as stated in the claim limitations of the present invention.

While Appellant asserts the argument that the "concept differs fundamentally from the virtual constructs of the present invention," it is noted that the term "virtual construct," under its broadest reasonable interpretation, would be properly read upon by the "plurality of sets of subintervals" disclosed by Burrows (See col. 25, lines 34-35), and the "list of Tcq triplets" as disclosed by Liu (See Section 4.1, page 11).

Furthermore, Appellant once again asserts that the invention as claimed permits "the simultaneous monitoring of multiple range queries by monitoring points in the monitored space." In response to Appellant's argument that the references fail to show certain features of Appellant's invention, it is noted that the feature upon which Appellant relies is not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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ii. *Burrows is Non-analogous Art to Liu and to the Claimed Invention*

In response to Appellant's argument that Burrows is nonanalogous art, it has been held that a prior art reference must either be in the field of Appellant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the Appellant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Burrows is directed towards the generation and search of a range-based index.

Appellant is directed to column 25, line 15 to column 26, line 39 of Burrows, wherein Burrows discloses a method wherein a user may state a query incorporating a date attribute and a word count. Moreover, in response to Appellant's argument that the references fail to show certain features of Appellant's invention, it is noted that the features upon which Appellant relies (i.e., "indexing for input queries") are not recited in the rejected claim(s). Instead, the limitations of the claimed invention merely recite the building of a query index such that the query index is used to match an event with the range queries. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

iii. *The Claimed Invention Does Not Result*

In response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).



iv. *Lack of Motivation and Hindsight Reasoning*

In response to Appellant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

v. *Liu/Burrows Fail to Satisfy the Plain Meaning*

Appellant asserts the argument that "in Li there is no teaching or suggestion of '.... Decomposing each range query into one or more predefined virtual constructs; building a query index; and using said query index to match an event with said range queries.'" See Appeal Brief, page 23. The Examiner respectfully disagrees. Appellant is directed to Section 3.2 of Liu which discloses that "[m]ediators and wrappers are used to decompose the query or trigger condition according to the number of data sources used to evaluate the query or the trigger condition" (Liu, page 8). One of ordinary skill in the art at the time the invention was made would be able to properly discern that the aforementioned disclosure would read upon and satisfy the decomposition step of the present invention. Furthermore, Appellant is directed to Section 2.1 of Liu wherein the Continual Query Concept is further disclosed, specifically that the processing of a continual query on a sequence of database states results in a sequence of query answers  $\{Q(S_1), Q(S_2), \dots, Q(S_n)\}$ . Therefore, as disclosed within Section 2.1 of Liu, one of ordinary skill in the art would then be able to apply the continual queries to time-based trigger conditions and content-based trigger conditions. Accordingly, the continual query may then be decomposed as stated in the claim limitations of the present invention.

Additionally, Appellant asserts the argument that "parsing an input query into query components" fails to satisfy the plain meaning of the claim limitation that requires "... decomposing each range query into one or more predefined virtual constructs." See Appeal Brief, page 23. The Examiner respectfully disagrees in that the method of "parsing" would properly read upon the decomposing step, under its broadest reasonable interpretation. That is, one of ordinary skill in the art would reasonably understand that decomposing a query would entail breaking said query into a plurality of parts, and likewise a prior art reference which discloses the parsing of a query would effectively entail breaking the query into multiple parts as well.

While Appellant asserts the argument that the "concept differs fundamentally from the virtual constructs of the present invention," it is noted that the term "virtual construct," under its broadest reasonable interpretation, would be properly read upon by the "plurality of sets of subintervals" disclosed by Burrows (See col. 25, lines 34-35), and the "list of Tcq triplets" as disclosed by Liu (See Section 4.1, page 11).

Furthermore, Appellant asserts the argument that the invention disclosed by Burrows is directed to the "indexing of range-based values of records within the word database and has nothing to do with a query index used to match an event in an event space." See Appeal Brief, page 23. The Examiner disagrees in that wherein Appellant is failed to clearly point out what is meant by a query index, the Examiner has appropriately applied the plain meaning in that the limitation merely recites the building of a query index such that the query index is used to match an event with the range queries. That is, wherein Burrows discloses a method wherein queries could be used to search for words within a range of numeric values, such a method would appropriately read upon the limitation of the present case wherein a query index (i.e. a database of literal values and words) is used to match an event (i.e. words within a predetermined interval) with the range queries.

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vi. Rejection of Claims 2, 3, 6, and 7

As per claims 2, 3, 6 and 7, Appellant has not asserted any specific arguments in response to the rejections of the claims but instead relies upon Appellant's aforementioned arguments. Therefore, for purposes of conciseness, Appellant is directed to the Examiner's response in the above.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

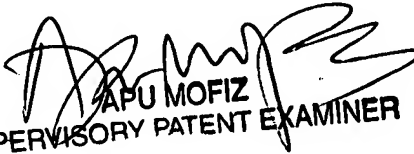
Respectfully submitted,


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